

Trusted Tester Conformance Test Process Checklist for Software

About this Document

DHS has provided this concise overview document to inform and assist the Contractor in constructing the necessary comprehensive test process for reporting ICT conformance as required for contractual compliance.

Section 508 Test Requirement

When developing or modifying software functions of information and communications technology (ICT), Contractors must demonstrate conformance to the applicable and current Section 508 standards. This includes the requirements in [Chapter 5](#) and [WCAG 2.0](#) Level A and AA Success Criteria. When the requirements in Chapter 5 do not address one or more software functions, the Contractor must demonstrate conformance to the Functional Performance Criteria specified in [Chapter 3](#).

Software Standards Conformance

This document represents a summarized overview of Contractor test requirements and is not itself a conformance test process. References and pointers to the comprehensive conformance test process guidance documents are cited in the paragraphs below.

The DHS Conformance Test process currently provides a test methodology for web architecture that aligns with the revised Section 508 requirements titled, [Trusted Tester Section 508 Conformance Test Process for Web version 5.0 \(TTv5\)](#). At the time of this writing however, there is no comparable Trusted Tester version 5 conformance test process that validates software for conformance against the Revised Section 508 standards.

In the absence of an updated software test process, the Contractor may utilize the software guidelines portion of the test methodology described in the document entitled, [Trusted Tester Section 508 Compliance Test Process for Applications, version 4.0 \(TTv4\)](#), as a component of the overall, required test process for testing software architecture.

If the Contractor uses this TTv4 test methodology for software, the Contractor shall address the test criteria not covered in those 4.0 guidelines (i.e., gaps) using **additional test procedures** that are capable of validating conformance for those missing success criteria.

The information in this document will assist the Contractor in constructing the necessary, comprehensive test process. This includes identifying the applicable software methodology in the TTv4 software guidelines as well as identifying the WCAG 2.0 Level A and AA Success Criteria that are missing from those guidelines for which the Contractor must construct **additional test procedures**, and thereby result in a comprehensive conformance test process as required for contractual compliance.

Section 508 Test Plan

Among the key points required for the test plan, it should include the identification and description of the **additional test procedures** used when planning for software testing.

Test methodology to use for software architecture

To perform the required full Section 508 conformance test, construct your testing methodology as follows:

1. Use the applicable test steps as described in the *TTv4 for Software Checklist* as identified in this document. Note that addressing these steps, by themselves, will only result in a **partial** treatment of the required test coverage for software.
2. Fill in the gaps in coverage by adding additional test procedures to those identified with an asterisk (*); these are also summarized in the *Regulatory Test Mapping: WCAG 2.0 and Section 508*.

TTv4 for Software Checklist

1. Keyboard access

Follow the TT v4 process to test keyboard accessibility, including:

▪ Yes ▪ No

- All features can be accessed by keyboard
- There are no keyboard traps
- All non-standard keyboard commands are documented
- Any mouseover information has an on-screen equivalent

2. Focus and revealed content

Follow the TT v4 process to test focus and the accessibility of revealed content:

▪ Yes ▪ No

- Visual indication of current focus is always shown
- Focus remains in dialog boxes until closed
- Revealed content is given focus or described to user
- Tab order is logical

Form fields and Controls

This section refers to *programmatic* (vs. purely visual) information which is provided to assistive technology (e.g., screen readers).

3. User controls

Follow the TT v4 process to test the accessibility of user controls:

▪ Yes ▪ No ▪ NA

- All user controls have descriptive and unique names
- All user controls have correct role and state information
- All multi-state elements provide their current status

4. Form fields

Follow the TT v4 process to test the accessibility of form fields:

▪ Yes ▪ No ▪ NA

- All form fields provide complete instructions and cues
- All form fields provide correct role, state and focus information
- All input text fields provide correct value information

5. Errors *

Follow the TT v4 process to test the accessibility of error/confirmation messages:

▪ Yes ▪ No ▪ NA

- The item in error is sufficiently described in text
- Error messages provide the information needed to correct input
- Options to reverse, confirm, or correct information is provided for exams, data storage, or applications causing legal or financial obligation,

Images

This section refers to *programmatically* (vs. purely visual) information which is provided to assistive technology (e.g., screen readers).

6. Images

Follow the TT v4 process to test the accessibility of images:

▪ Yes ▪ No ▪ NA

- All meaningful images have equivalent descriptions, including role and state when interactive
- All decorative images do not provide names or descriptions
- All status indicators provide current status
- All images have consistent meaning

Tables

This section refers to *programmatically* (vs. purely visual) information which is provided to assistive technology (e.g., screen readers).

7. Tables

Follow the TT v4 process to test the accessibility of tables:

▪ Yes ▪ No ▪ NA

- All data table header cells are identified
- All data table cells are associated with correct headers
- No data table is presented as an image

Navigation, Structure, and Language

8. Window Title

Follow the TT v4 process to test the accessibility of window titles:

▪ Yes ▪ No

- Windows have meaningful titles

9. Language *

Construct procedures to test page languages:

▪ Yes ▪ No ▪ NA

- The primary language of the page is programmatically identified
- Content with different language is programmatically identified

10. Frames

Follow the TT v4 process to test the accessibility of frames

▪ Yes ▪ No ▪ NA

- A frames title or name is descriptive

11. Headings *

Construct procedures to test headings

▪ Yes ▪ No ▪ NA

- Headings describe the purpose or topic content
- Text programmatically identified as a heading functions as a heading
- Visual headings are programmatically determinable
- Programmatic heading levels logically match the heading level on the page

Video and Audio

12. Video-only and audio-only

Follow the TT v4 process and construct procedures to test video and audio: **▪ Yes ▪ No ▪ NA**

- All animations have equivalent text or audio description
- All audio-only files have equivalent text description (or transcript *)
- User can pause, stop, or control volume of autoplaying audio content *

13. Multimedia

Follow the TT v4 process and construct procedures to test multimedia: **▪ Yes ▪ No ▪ NA**

- All multimedia has synchronized, equivalent captions
- All multimedia has synchronized, equivalent audio descriptions
- Caption and audio description controls are provided *
- Caption and audio description controls at same level as volume/channel *
- Audio controls at same level as volume/channel *
- User can pause, stop, or control volume of autoplaying audio content *

Visuals

14. Color

Follow the TT v4 process and construct procedures to test the use of color: **▪ Yes ▪ No ▪ NA**

- No information is provided by color alone
- Contrast ratio of text is at least 4.5:1 (or 3:1 for 18 pt., 14 pt. bold or larger *)

15. Flashing/Flickering

Follow the TT v4 process to test flashing/flickering content: **▪ Yes ▪ No ▪ NA**

- Flash/Flicker frequency is programmed at or above 3 Hz

16. Moving/blinking/updating *

Construct procedures to test moving, blinking, updating content: **▪ Yes ▪ No ▪ NA**

- User can pause, stop, or hide moving, blinking, or scrolling content
- User can pause, stop, or control frequency of auto-updating content
- User is notified of auto-updating content

Timeouts

17. Timeouts

Follow the TT v4 process and construct procedures to test timeouts **▪ Yes ▪ No ▪ NA**

- Users are notified of timeouts
- The user can extend the time limit before time expires
- Timeout notification is shown for at least 20 seconds
- The user can turn off or adjust the time limit before time expires *

OS Accessibility Settings

18. OS Settings

Follow the TT v4 process to test OS settings

▪ Yes ▪ No ▪ NA

- Application does not disrupt OS Accessibility option: High Contrast
- Application does not disrupt OS Accessibility option: Sticky Keys
- Application does not disrupt OS Accessibility option: Sound Sentry
- Application does not disrupt OS Accessibility option: Text size
- Application adopts OS high contrast settings (or offers at least 4 options)
- Application adopts OS larger text size settings and is still legible

Specific Software

19. Assistive Technology

Construct procedures to test platform accessibility services

▪ Yes ▪ No ▪ NA

- Application must use platform accessibility services *

20. Authoring Tools *

Construct procedures to test authoring tools

▪ Yes ▪ No ▪ NA

- Has mode to create WCAG 2.0 conforming content *
- Has prompts to support creation of WCAG 2.0 conforming content *
- Templates support creation of WCAG 2.0 conforming content *
- Conversion feature preserves accessibility information *

Regulatory Test Mapping: WCAG 2.0 and Section 508

WCAG 2.0 Regulatory Test Mapping

	TTv4	Contractor
CONFORMANCE LEVEL		
Requirement 1: Conformance Level (conforming alternate version)		X
Requirement 2: Full pages		X
Requirement 3: Complete processes		X
Requirement 4: Only accessibility-supported ways		X
Requirement 5: Non-interference		X
PRINCIPLE 1 - PERCEIVABLE		
Guideline 1.1 - Text Alternatives		
1.1.1 - Non-text Content		
- Controls, Input	X	
- Time-Based Media	X	
- Test		X
- SVG images		X
- Sensory		X
- CAPTCHA	X	
- CAPTCHA (alternate versions)		X
- Decoration, formatting, Invisible	X	
Guideline 1.2 -Time-based Media		
1.2.1 Audio-only and Video-only (Prerecorded)		
- Prerecorded Audio-only	X	
- Prerecorded Video-only	X	
1.2.2 - Captions (Prerecorded)	X	
1.2.3 - Audio Description or Media Alternative (prerecorded)	X	
1.2.4 - Captions (Live)		X
1.2.5 - Audio Description (Prerecorded)	X	
Guideline 1.3 -Adaptable		
1.3.1 - Info and Relationships	X	
1.3.2 - Meaningful Sequence	X	
1.3.3 - Sensory Characteristics	X	
1.3.4 - Orientation		X
1.3.5 - Identify Input Purpose	X	
Guideline 1.4 -Distinguishable		
1.4.1 - Use of Color	X	
1.4.2 - Audio Control		X
1.4.3 - Contrast (Minimum)	X	
1.4.4 - Resize text		X
1.4.5 - Images of text		X
1.4.10 - Reflow		X

	TTv4	Contractor
1.4.11 - Non-text Contrast		X
1.4.12 - Text Spacing		X
1.4.13 - Content on Hover of Focus		X
PRINCIPLE 2 - OPERABLE		
Guideline 2.1 - Keyboard Accessible		
2.1.1 - Keyboard	X	
2.1.2 - No Keyboard Trap	X	
2.1.4 - Character Key Shortcuts		X
Guideline 2.2 - Enough Time		
2.2.1 - Timing Adjustable		X
2.2.2 - Pause, Stop, Hide		X
Guideline 2.3 - Seizures and Physical Reactions		
2.3.1 - Three Flashes or Below Threshold		X
Guideline 2.4 - Navigable		
2.4.1 - Bypass Blocks	X	
2.4.2 - Page Titled	X	
2.4.3 - Focus Order	X	
2.4.4 - Link Purpose (In Context)	X	
2.4.5 - Multiple Ways	X	
2.4.6 - Headings and Labels	X	
2.4.7 - Focus Visible	X	
Guideline 2.5 - Input Modalities		
2.5.1 - Pointer Gestures		X
2.5.2 - Pointer Cancellation		X
2.5.3 - Label in Name	X	
2.5.4 - Motion Actuation		X
PRINCIPLE 3 - UNDERSTANDABLE		
Guideline 3.1 - Readable		
3.1.1 - Language of Page	X	
3.1.2 - Language of Parts		X
Guideline 3.2 - Predictable		
3.2.1 - On Focus		X
3.2.2 - On Input		X
3.2.3 - Consistent Navigation		X
3.2.4 - Consistent Identification		X
Guideline 3.3 - Input Assistance		
3.3.1 - Error Identification		X
3.3.2 - Labels or Instructions	X	
3.3.3 - Error Suggestion		X
3.3.4 - Error Prevention (Legal, Financial, Data)		X
PRINCIPLE 4 - ROBUST		

	TTv4	Contractor
Guideline 4.1 -Compatible		
4.1.1 - Parsing		X
4.1.2 - Name, Role, Value	X	
4.1.3 - Status Messages	X	

Section 508 Regulatory Test Mapping

	TTv4	Contractor
CHAPTER 5 - SOFTWARE		
502.2 - Documented Accessibility Features	X	
502.3 - Accessibility Services		X
502.3.1 - Object Information	X	
502.3.3 - Row, Column, and Headers	X	
502.3.4 - Values	X	
502.3.6 - Label Relationships	X	
502.3.7 - Hierarchical Relationships	X	
502.3.8 - Text	X	
502.3.10 - List of actions		X
502.3.12 - Focus Cursor	X	
502.3.14 - Event Notification	X	
502.4 - Platform Accessibility Features	X	
503.2 - User Preferences	X	
503.3 - Alternative User Interfaces		X
503.4 - User Controls for Captions and Audio Description		X
504.2 - Content Creation or Editing		X
504.2.1 - Preservation of Information Provided for Accessibility in Format Conversion		X
504.3 - Authoring tool Prompts for creation of accessible content		X
504.4 - Templates provided by authoring tools to facilitate creation of accessible content		X